

In the Claims:

Please cancel claims 1-100.

Please add the following new claims 101-157.

101. (new) A video display, comprising:

a first light source operable to emit a beam of light at a first wavelength;

a first beam scanner aligned to receive the beam of light from the first light source and operable to scan the beam across a field-of-view; and

a photo-luminescent panel subtending at least a portion of the field-of-view and aligned to receive the scanned light beam; the photo-luminescent panel including a wavelength-converting material operable to emit light at a second wavelength in response to receiving light at the first wavelength.

102. (new) The video display of claim 101, further comprising:

control electronics operable to provide an image signal to the first light source, and wherein;

the first light source is responsive to the control electronics to modulate the beam of emitted light between at least two energy levels.

103. (new) The video display of claim 101, wherein a video image displayed thereon is a static image.

104. (new) The video display of claim 101, wherein the first beam scanner includes a micro-electro-mechanical-system (MEMS) scanner.

105. (new) The video display of claim 104, wherein the MEMS scanner is operable to scan a frame at a refresh rate of about 50 Hz or higher.

106. (new) The video display of claim 101, wherein the first light source includes a laser diode.

107. (new) The video display of claim 106, wherein the laser diode is operable to emit ultraviolet light.

108. (new) The video display of claim 107, wherein the laser diode is operable to emit near-ultraviolet light.

109. (new) The video display of claim 108, wherein the ultraviolet laser diode is operable to emit light at between about 405 and 410 nanometers wavelength.

110. (new) The video display of claim 106, wherein the laser diode is operable to emit infrared light.

111. (new) The video display of claim 101, wherein the first light source includes a diode-pumped-solid-state laser.

112. (new) The video display of claim 101, wherein the wavelength-converting material includes a phosphor.

113. (new) The video display of claim 101, wherein the wavelength-converting material includes an organic compound.

114. (new) The video display of claim 101, wherein the photo-luminescent panel includes a plurality of wavelength-converting materials, each of the plurality of wavelength-converting materials being responsive to convert incident light to a particular second wavelength.

115. (new) The video display of claim 114, wherein each of the plurality of wavelength-converting materials is formed in a series of (interstitially-located vs. interdigitated vs. interlaced) lines.

116. (new) The video display of claim 114, wherein the set of particular second emission wavelengths includes wavelengths corresponding to red, green, and blue.

117. (new) The video display of claim 101, further comprising a radio frequency receiver coupled to provide an image signal to the first light source.

118. (new) The video display of claim 101, further comprising a computer for generating an image signal.

119. (new) The video display of claim 101, wherein the photo-luminescent panel is directly observable by a viewer.

120. (new) The video display of claim 101, wherein the photo-luminescent panel is in a rear-projection configuration wherein the scanned beam at the first wavelength impinges upon the photo-luminescent panel surface opposite that of the viewer.

121. (new) The video display of claim 101, wherein the photo-luminescent panel is in a front-projection configuration wherein the scanned beam at the first wavelength impinges upon the photo-luminescent panel surface facing the viewer.

122. (new) The video display of claim 101, wherein the first beam scanner is operable to scan the beam in a substantially raster pattern.

123. (new) A method for producing a video image, comprising the steps of:
receiving an image signal;
modulating the output of a light source responsive to the image signal;
scanning a modulated first wavelength beam from the light source across a photo-luminescent panel; and
converting the first wavelength to a second wavelength.

124. (new) The method for producing a video image of claim 123, wherein the scanned modulated first wavelength beam forms a pattern on the photo-luminescent panel corresponding to the image signal.

125. (new) The method for producing a video image of claim 124, wherein the pattern of the emitted second wavelength light corresponds to the pattern of the scanned modulated first wavelength beam.

126. (new) The method for producing a video image of claim 122, further comprising the steps of repeatedly scanning the modulated first wavelength beam over the photo-luminescent panel at a video frame rate.

127. (new) The method for producing a video image of claim 126 wherein the video frame rate is equal to or greater than about 50 Hz.

128. (new) The method for producing a video image of claim 123, wherein the modulated first wavelength beam is scanned across the photo-luminescent panel in a substantially raster pattern.

129. (new) The method for producing a video image of claim 123, wherein the first wavelength is in the ultraviolet region of the electromagnetic spectrum and the second wavelength is in the visible region of the electromagnetic spectrum.

130. (new) The method for producing a video image of claim 129, wherein the first wavelength is between about 405 and 410 nanometers.

131. (new) The method for producing a video image of claim 123, wherein the light source is a laser diode.

132. (new) The method for producing a video image of claim 123, wherein the light source is a diode-pumped-solid-state laser.

133. (new) The method for producing a video image of claim 123, wherein the light source is an LED.

134. (new) A display device that produces a visible image in response to an input image signal, comprising:

a screen, including a base plate and a wavelength converting coating responsive to output light of a first wavelength in a visible range in response to light of a second wavelength;

a light source operative to emit modulated light of the second wavelength in response to the image signal; and

a scanner assembly having an input aligned optically to receive light from the light source and an output aligned optically to direct the light received at the input to the screen, the scanner assembly being responsive to a driving signal to scan the received light directly onto the wavelength converting coating in a periodic pattern.

135. (new) The display of claim 134 wherein the second wavelength is a non-visible wavelength.

136. (new) The display of claim 134 wherein the scanner assembly includes a mirror mounted for pivotal movement about an axis of rotation.

137. (new) The display of claim 134 wherein the scanner assembly includes a microelectromechanical scanner having a mirror positioned to deflect the light received at the input.

138. (new) The display of claim 137 wherein the microelectromechanical scanner is biaxial.

139. (new) The display of claim 134 wherein the wavelength converting coating is an infrared sensitive phosphor and the second wavelength is an infrared wavelength.

140. (new) The display of claim 134 wherein the wavelength converting coating is a visible wavelength sensitive phosphor and the second wavelength is a visible wavelength.

141. (new) The display of claim 134 wherein the wavelength converting coating is an ultraviolet wavelength sensitive phosphor and the second wavelength is an ultraviolet wavelength.

142. (new) The display of claim 134 wherein the light source includes a directly modulated light emitter.

143. (new) The display of claim 142 wherein the directly modulated light emitter is a laser diode.

144. (new) The display of claim 134 wherein the directly modulated light emitter is a non-coherent light emitter.

145. (new) The display of claim 134 wherein the light source is a matrix addressable emitter.

146. (new) The display of claim 145 wherein the matrix addressable emitter includes a LCD panel.

147. (new) The display of claim 146 wherein the matrix addressable emitter further includes an infrared light emitter and wherein the LCD panel selectively transmits or reflects infrared light from the infrared light emitter.

148. (new) The display of claim 147 wherein the infrared light emitter includes an infrared light emitting diode.

149. (new) The display of claim 145 wherein the matrix addressable emitter includes a plasma-based emitter panel.

150. (new) The display of claim 145 wherein the matrix addressable emitter includes a cathode ray tube.

151. (new) A method of providing a visible image to a user, comprising the steps of:

modulating light of a first wavelength with image information;
scanning the light of a first wavelength in a periodic pattern directly onto a wavelength converting coating; and
converting with the wavelength converting coating the scanned light of the first wavelength into light of a second wavelength.

152. (new) The method of claim 151 wherein the step of modulating light with image information includes the steps of:

emitting continuous wave light of the first wavelength with a light source; and
modulating the continuous light with an external amplitude modulator separate from the light source.

153. (new) The method of claim 151 wherein the step of scanning the light of the first wavelength in a periodic pattern includes directing the light through a substantially raster pattern.

154. (new) The method of claim 151 wherein the step of scanning the light of the first wavelength in a periodic pattern includes redirecting the light with a scanning mirror.

155. (new) The method of claim 151 wherein the step of converting the scanned light of the first wavelength into light of a second wavelength includes applying the scanned light to a photo-luminescent material.

156. (new) The method of claim 155 wherein the photo-luminescent material includes a phosphor.